Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A system for enabling verbal communication on behalf of a local entity with a nearby user, the system comprising:

- a location determining arrangement ~~means~~ for determining the location of the user,
- a comparison arrangement ~~means~~ for comparing the location of the user with the known locations of entities having associated voice services, these voice services being separately hosted from the entities themselves;
- a communications infrastructure;
- an audio output arrangement ~~means~~ operatively connected to the communication infrastructure and either forming part of equipment carried by the user or located in the locality of said local entity;
- a voice service arrangement for providing said voice service, the voice service arrangement being connected to said communications infrastructure; and
- a service initiation arrangement ~~means~~, responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to initiate, automatically or under user control, voice service delivery by the voice service arrangement via the communications infrastructure and the audio output arrangement ~~means~~ with the voice service acting as voice proxy for the local entity;

the audio output arrangement ~~means~~ comprising multiple sound output devices spaced from the local entity, and a controller

~~means~~ for controlling their ~~sound output~~ excitation such that voice output from the voice service appears to the user to emanate from the location of said local entity independently of the user's position and head orientation relative to the entity.

2. (currently amended) A system according to claim 1, wherein the comparison arrangement ~~means~~ is separate from any equipment carried by the user, the service initiation arrangement ~~means~~ comprising:

- an arrangement ~~means~~ responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to send contact data for the voice service to the user; and
- an arrangement ~~means~~, provided in user equipment intended carried by the user, for receiving the contact data and for enabling the user to contact the voice service arrangement using the contact data in order to initiate voice service delivery.

3. (currently amended) A system according to claim 1, wherein the comparison arrangement ~~means~~ is separate from any equipment carried by the user and the voice service arrangement comprises storage arrangement ~~means~~ for storing voice service content, and a voice browser for interpreting voice service content in respect of multiple different voice services for which content is stored by the storage arrangement ~~means~~, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the corresponding voice service to the voice browser of the voice service arrangement.

4. (currently amended) A system according to claim 1, further comprising user equipment adapted to communicate with the communications infrastructure over wireless arrangement ~~means~~, the comparison arrangement ~~means~~ being separate from the user equipment and the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the user equipment to the voice service arrangement to enable the latter to initiate contact with the user over the communications infrastructure.

5. (currently amended) A system according to claim 1, further comprising user equipment adapted to communicate with the communications infrastructure over wireless arrangement ~~means~~, at least the comparison arrangement ~~means~~ and the service initiation arrangement ~~means~~ being provided in the user equipment, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to contact the voice service arrangement over the communications infrastructure.

6. (currently amended) A system according to claim 1, further comprising audio input arrangement ~~means~~ operatively connected to the communications infrastructure and either forming part of equipment carried by the user, or located in the locality of said local entity, the audio input and output arrangement ~~means~~ together enabling a user to interact with the voice service through spoken dialog with voice input by the user through the audio input arrangement ~~means~~ and voice output to the user through the audio output arrangement ~~means~~.

7. (currently amended) A system according to claim 6, wherein in said dialog the entity is represented in first person terms through the voice service.

8. (currently amended) A system according to claim 6, wherein both the audio input and output arrangement ~~means~~ form part of the user equipment carried by the user, the user equipment being operative to exchange said voice input and voice output with the voice service as voice signals passed across the communications infrastructure.

9. (currently amended) A system according to claim 6, wherein both the audio input and output arrangement ~~means~~ are located in the locality of said entity apart from the user equipment, the voice service arrangement being operative to exchange said voice input and voice output with the audio input and output devices as voice signals passed across the communications infrastructure.

10. (currently amended) A system according to claim 6, wherein the audio input arrangement ~~means~~ forms part of equipment carried by the user and the audio output arrangement ~~means~~ is located in the locality of said entity apart from the user equipment, the voice service arrangement being arranged to exchange said voice input and voice output with the audio input and output devices as voice signals across the communications infrastructure.

11. (currently amended) A system according to claim 1, wherein said multiple sound output devices are headphones worn by the user, the controller of the audio output arrangement being

arranged to control excitation ~~location of the voice service~~ sound output ~~in the audio field generated by~~ of the headphones ~~being controlled to take account of~~ in dependence on the relative positions of the user and entity and rotation[[s]] of the user's head.

12. (currently amended) A system according to claim 1, wherein said multiple sound output devices are loudspeakers associated with the locality of the entity rather than with the user and connected with the voice service through a communications infrastructure, the controller of the audio output arrangement being arranged to control excitation ~~sound output from~~ of the loudspeakers ~~being controlled in~~ dependence on the relative positions of the user and entity.

13. (currently amended) A system according to claim 6, wherein the voice service arrangement comprises:

- a voice page server for serving voice pages in the form of text with embedded voice markup tags; and
- a voice browser comprising:
  - a speech recognizer for carrying out speech recognition of user voice input received as voice signals;
  - a dialog manager for effecting dialog control on the basis of output from the speech recognizer and pages served by the voice page server; and
  - a text-to-speech converter operative to convert voice pages into voice output signals under the control of the dialog manager.

14. (currently amended) A system according to claim 8, wherein the user equipment comprises a mobile phone providing the said audio input and output arrangement ~~means~~, with a wireless

communication sub-system ~~means~~ of the mobile phone serving for the transfer of voice service input and output to and from the said audio input and output arrangement ~~means~~.

15. (currently amended) A system according to claim 8, wherein the voice service arrangement comprises:

- a voice page server for serving voice pages in the form of text with embedded voice markup tags; and
- a voice browser comprising:
  - a speech recognizer for carrying out speech recognition of user voice input received as voice signals;
  - a dialog manager for effecting dialog control on the basis of output from the speech recognizer and pages served by the voice page server; and
  - a text-to-speech converter operative to convert voice pages into voice output signals under the control of the dialog manager;

the user equipment comprising a mobile phone providing said audio input and output arrangement ~~means~~, with a wireless communication sub-system ~~means~~ of the mobile phone serving for the transfer of voice service input and output to and from the said audio input and output arrangement ~~means~~.

16. (currently amended) A system according to claim 15, wherein the voice browser is not part of the user's equipment, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the voice service, in the form of a URL, to the user's equipment, the user equipment being operative to pass the contact data to the voice browser via a data-capable bearer circuit set up by the mobile phone

through the communications infrastructure, and the voice browser being operative to use the contact data to contact the voice page server and being further operative to establish a voice circuit with the mobile phone for the exchange of voice input and/or output between the user and voice browser.

17. (currently amended) A system according to claim 15, wherein the voice browser is not part of the user's equipment, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the voice service, in the form of a URL, to the user's equipment, the user equipment being operative to pass the contact data to the voice browser via a data-capable bearer circuit set up by the mobile phone through the communications infrastructure, and the voice browser being operative to use the contact data to access the voice page server and to thereafter use the data-capable bearer circuit for voice input and/or output between the user and voice browser using a packetized voice protocol.

18. (currently amended) A system according to claim 15, wherein the voice browser is part of the user's equipment, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the voice service, in the form of a URL, to the user's equipment, the voice browser being operative to use the contact data passed to the equipment to access the voice page server via a data-capable bearer circuit set up by the mobile phone through the communications infrastructure for the exchange of text based input and/or output between the voice browser and voice page server.

19. (currently amended) A system according to claim 15, wherein the voice browser is not part of the user's equipment, the service initiation arrangement ~~means~~ being responsive to the comparison arrangement ~~means~~ determining that the user is close to a said entity, to pass contact data for the voice service, in the form of a URL, directly to the voice browser together with information for contacting the user's equipment, the voice browser being arranged to contact the user on the mobile phone using a voice circuit or data connection that is then used for voice input/or and output between the user and voice browser.

20. (currently amended) A system according to claim 1, wherein the communications infrastructure is a proprietary-space local wireless network hosting the voice service arrangement, the local entity being located in the proprietary-space concerned.

21. (currently amended) A system according to claim 8, wherein the communications infrastructure is a proprietary-space local wireless network hosting the voice service arrangement, the local entity being located in the proprietary-space concerned and the user equipment comprising a wireless headset.

22. (currently amended) A system according to claim 20, wherein said audio output arrangement ~~means~~ comprises headphones worn by the user, the controller of the audio output arrangement being arranged to control excitation ~~location of the voice service sound output in the audio field generated by~~ of the headphones ~~being controlled~~ to take account of the relative positions of the user and entity and rotations of the user's head ~~such that~~

~~the sound output appears to be originating from said local entity~~.

23. (currently amended) A system according to claim 1, wherein the location determining arrangement ~~means~~ and the comparison arrangement ~~means~~ are arranged to operate on an on-going basis.

24. (currently amended) A method according to claim 1, wherein the location determining arrangement ~~means~~ and the comparison arrangement ~~means~~ are arranged to operate on a once-off basis as requested by the user.

25. - 27. (canceled)

28. (currently amended) A system according to claim 1, further comprising controllable functionality associated with the local entity and arranged to be controlled by control data passed to it from the voice service to operate in coordination with said voice output.

29. (currently amended) A system according to claim 28, wherein said controllable functionality comprises a mouth representation device associated with the local entity and arranged to present a mouth representation that is ~~includes a mouth-like feature~~ movable ~~by~~ in dependence on the control data from the voice service ~~whereby~~ to ~~cause operation of the mouth-like feature~~ operate in synchronism with voice output from the voice service.

30. (currently amended) A system according to claim 1, further comprising an arrangement for determining the orientation of the local entity as perceived from the user's current location,

~~means for sensing the position of the user relative to the entity, and means for passing corresponding position data to the voice service,~~ the voice service being operative to condition its voice output in dependence on the determined orientation of the local entity ~~user's sensed position~~.

31. (currently amended) A system according to claim 1, further comprising an arrangement for determining ~~means for sensing~~ the orientation of the user relative to the entity, ~~and means for passing corresponding orientation data to the voice service,~~ the voice service being operative to condition its voice output in dependence on the user's determined ~~sensed~~ orientation.

32. (currently amended) A system according to claim 1, further comprising an arrangement for determining ~~means for sensing~~ the line of approach or departure of the user relative to the entity, ~~and means for passing corresponding line-of-approach data to the voice service,~~ the voice service being operative to condition its voice output in dependence on the user's line of approach or departure.

33. (currently amended) A voice-proxy method ~~of voice communication concerning a local entity~~ wherein:

(a) the location of a user is determined and compared with the known locations of entities that have ~~having~~ associated voice services~~, these voice services being~~ separately hosted from the entities themselves;

(b) upon the user being determined to be close to a said entity, contact is initiated between the user and the voice service associated with ~~the~~ this local entity; and

(c) the user interacts with the voice service with the latter acting as voice proxy for the local entity, voice output from the service being through audio output devices spaced from the local entity but controlled such that the ~~service~~ voice output appears to the user to emanate from the location of that entity independently of the user's position and head orientation relative to the entity.

34. (currently amended) A method according to claim 33, wherein ~~step~~ (a) is effected by a service system separate from any equipment carried by the user; the service system upon determining that the user is close to a said entity, effecting ~~step~~ (b) by passing contact data for the voice service to the user whereby to enable the user to contact the voice service.

35. (currently amended) A method according to claim 33, wherein ~~step~~ (a) is effected by a service system separate from any equipment carried by the user, the service system upon determining that the user is close to a said entity, effecting ~~step~~ (b) by passing contact data for the voice service to a voice browser of the service system or communications infrastructure whereby to enable the voice browser to contact the voice service on behalf of the user.

36. (currently amended) A method according to claim 33, wherein ~~step~~ (a) is effected by a service system separate from any equipment carried by the user, the service system upon determining that the user is close to a said entity, effecting ~~step~~ (b) by passing user contact information to the voice service whereby to enable the latter to initiate contact with the user.

37. (currently amended) A method according to claim 33, wherein ~~step~~ (a) is effected by equipment carried by the user which, upon determining that the user is close to a said entity, effects ~~step~~ (b) by contacting the voice service.

38. (currently amended) A method according to claim 33, wherein in ~~step~~ (c) the user and voice service interact through spoken dialog with both voice input by the user and voice output by the service.

39. (original) A method according to claim 38, wherein in said dialog the entity is represented in first person terms through the voice service.

40. (currently amended) A method according to claim 33, wherein ~~step~~ (c) involves voice input by the user and voice output by the service with both voice input and voice output being carried across the wireless network between the voice service and sound input and output devices forming part of the user's equipment.

41. (currently amended) A method according to claim 33, wherein ~~step~~ (c) involves voice input by the user and voice output by the service with both voice input and voice output being exchanged with the user by local sound input and output devices that are associated with the locality of the entity rather than with the user and are connected with the voice service through a communications infrastructure.

42. (currently amended) A method according to claim 33, wherein ~~step~~ (c) involves voice input by the user and voice output by

the service, voice input being carried across the wireless network to the voice service from a sound input device forming part of the user's equipment, and voice output being through at least one local sound output device that is associated with the locality of the entity rather than with the user and is connected with the voice service through a communications infrastructure.

43. (currently amended) A method according to claim 33, wherein said multiple sound output devices are headphones worn by the user, ~~the location of the voice service sound output in the audio field generated by~~ excitation of the headphones being controlled to take account of the relative positions of the user and entity and rotations of the user's head.

44. (currently amended) A method according to claim 33, wherein said multiple sound output devices are loudspeakers associated with the locality of the entity rather than with the user and connected with the voice service through the communications infrastructure, ~~the sound output from~~ excitation of the loudspeakers being controlled in dependence on the relative positions of the user and entity.

45. (original) A method according to claim 33, wherein the voice service is effected by the serving of voice pages in the form of text with embedded voice markup tags to a voice browser, the voice browser interpreting these pages and carrying out speech recognition of user voice input, text to speech conversion to generate voice output, and dialog management; the voice browser being disposed between a voice page server and the user.

46. (currently amended) A method according to claim 33, wherein the user equipment includes a mobile phone, ~~step~~ (c) involving use of the mobile phone to transfer voice service input and output to and from the user.

47. (currently amended) A method according to claim 33, wherein:

- the voice service is effected by the serving of voice pages in the form of text with embedded voice markup tags to a voice browser, the voice browser interpreting these pages and carrying out speech recognition of user voice input, text to speech conversion to generate voice output, and dialog management; the voice browser being disposed between a voice page server and the user; and

- the user has equipment including a mobile phone, ~~step~~ (c) involving use of the mobile phone to transfer voice service input and output to and from the user.

48. (currently amended) A method according to claim ~~48~~ 33, wherein the voice browser is not part of the user's equipment and in ~~step~~ (b) contact data for the voice service, in the form of a URL, is passed to the user's equipment from where it is passed using the mobile phone via a data-capable bearer service of the mobile-phone wireless network, to the voice browser, the voice browser calling the user on the mobile phone using a voice circuit that is then used in ~~step~~ (c) for voice input and/or output between the user and voice browser.

49. (currently amended) A method according to claim 48, wherein the voice browser is not part of the user's equipment and in

~~step~~ (b) contact data for the voice service, in the form of a URL, is passed to the user's equipment from where it is passed using the mobile phone, via a data-capable bearer service of the mobile-phone wireless network, to the voice browser; the data-capable bearer service being subsequently used in ~~step~~ (c) for voice input and/or output between the user and voice browser using a packetized voice protocol.

50. (currently amended) A method according to claim 48, wherein the voice browser is part of the user's equipment and in ~~step~~ (b) contact data for the voice service, in the form of a URL, is passed to the user's equipment, the voice browser using this contact data in ~~step~~ (b) to access, via a data-capable bearer service of the mobile-phone wireless network, the voice page server; the data-capable bearer service being subsequently used in ~~step~~ (c) for passing text based input and/or output between the voice browser and voice page server.

51. (currently amended) A method according to claim 48, wherein the voice browser is not part of the user's equipment and in ~~step~~ (b) contact data for the voice service, in the form of a URL, is passed directly to the voice browser together with information for contacting the user's equipment, the voice browser contacting the user on the mobile phone using a voice circuit or data connection that is then used in ~~step~~ (c) for voice input/or and output between the user and voice browser.

52. (original) A method according to claim 33, wherein a proprietary-space local wireless network hosts the voice service, the local entity being located in the proprietary-space concerned .

53. (currently amended) A method according to claim 52, wherein the user has a wireless headset which in ~~step~~ (c) is used for exchanging voice input and output with the voice service.

54. (currently amended) A method according to claim 33, wherein the carrying out of ~~step~~ (b) is subject to user approval at the time.

55. (currently amended) A method according to claim 33, wherein location determination and comparison with the known location of entities having associated voice services, is effected in ~~step~~ (a) on an on-going basis.

56. (currently amended) A method according to claim 33, wherein location determination and comparison with the known location of entities having associated voice services, is effected in ~~step~~ (a) on a once-off basis as requested by the user.

57. (currently amended) A method according to claim 33, wherein in ~~step~~ (b) the identity of the user is sent to the voice service and used by the latter to look up user profile data which is then used to customise the voice service to the user.

58. - 60. (cancelled)

61. (currently amended) A method according to claim 33, wherein the local entity has associated controllable functionality that is controlled by control data passed to it from the voice service to operate in coordination with said voice output ~~via a network connection or short-range link~~

~~between the user equipment and said associated functionality of the local entity~~.

62. (currently amended) A method according to claim 61, wherein the controllable functionality comprises a mouth representation device associated with the local entity and arranged to present a mouth representation that is movable in dependence on ~~the local entity has an associated mouth-like feature movable by said functionality,~~ the control data from the voice service ~~being used to cause operation of the mouth-like feature~~ to operate in synchronism with voice output from the voice service.

63. (currently amended) A method according to claim 33, wherein the voice output provided from the service in (c) ~~provided to a user~~ is dependent on the orientation of the local entity as perceived from the user's current location ~~user's position, orientation or line of approach relative to the entity~~.

64. (new) A method according to claim 33, wherein the voice output provided from the voice service in (c) is dependent on the user's direction of facing relative to the local entity.

65. (new) A method according to claim 33, wherein the voice output provided from the voice service in (c) is dependent on the user's line of approach or departure relative to the local entity.

66. (new) A system according to claim 28, further comprising a short-range-communications arrangement comprising complimentary elements at the local entity and in user-carried equipment for establishing a short range link between the user-

carried equipment and said controllable functionality; the user-carried equipment being arranged to receive said control data from the voice service arrangement in the course of the latter acting as a voice proxy for the local entity, and to pass on the control data via said short-range communication arrangement to said controllable functionality.

67. (new) A method according to claim 61, wherein the control data is passed to said controllable functionality over a short range communication link established between said functionality and equipment carried by the user.